B. W. Felthousen,

Pump.

NO. 103,435. Patented May 24, 1870.

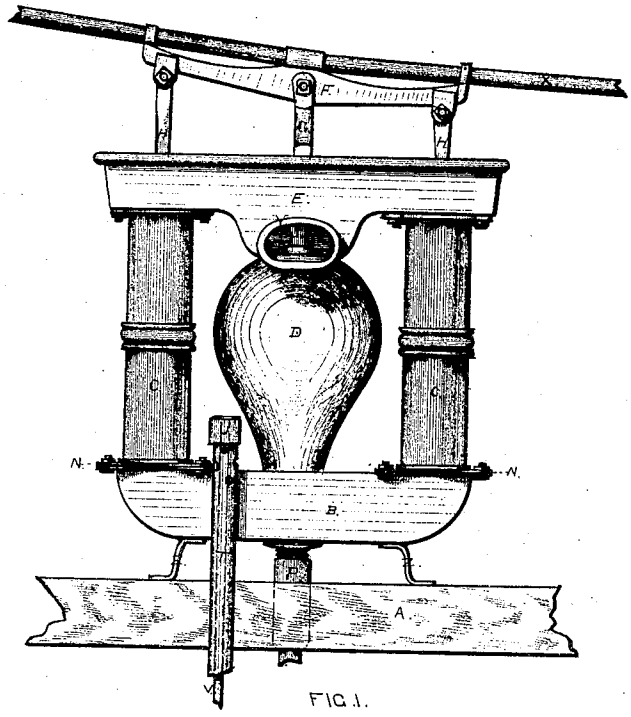

FIG. 1.

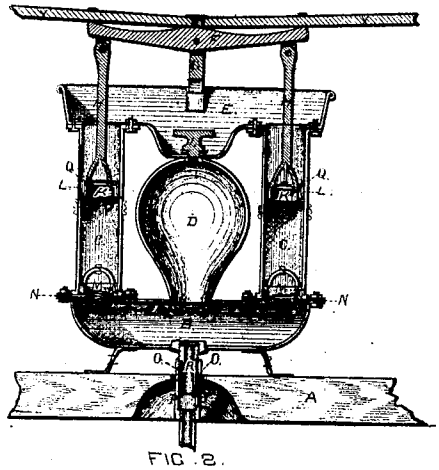

FIG. 2.

FIG. 3.

WITNESS.

J. B. Smith

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INVENTOR.

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BARRENT W. FELTHOUSEN, OF MILWAUKEE, WISCONSIN.

Letters Patent No. 103,435, *dated May* 24, 1870.

IMPROVEMENT IN PUMPS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, BARRENT W. FELTHOUSEN, of the city and county of Milwaukee and State of Wisconsin, have invented a new and useful Improvement in Pumps; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings forming part of this specification, in which—

Figure 1 is a side view of my invention;

Figure 2, a sectional view; and

Figure 3, a view of the screw-plug, which goes in the top of air-chamber.

Similar letters of reference in each of the figures indicate corresponding parts.

The object and nature of my invention is to manufacture a pump that will work easy and be free from many objections, such as the valves getting rusty, and hard and rigid, and to provide for air being conveyed to the water to be pumped out of a vessel, so that the pump shall work easy, and also to provide for measuring the water in the vessel at any time.

A is the deck of a vessel, on which the pump stands.

B is the water-space in the bottom of the pump.

C are the two cylinders, in which the valves and pump-rods work.

D is the air-chamber.

E is the water-basin, which the water falls into when raised by the pump.

F, the brake, with which the rods and lifting-valves are operated.

G, fulcrum, on which the brakes work.

H H, lifting-valves' rods.

I, a stop-cock on top of air-chamber D, which has three openings in its sides, to let air into the air-chamber, when it is unscrewed.

K K, the lifting-valves on the rods H H.

L, leather packing on valves K.

M, the lower or stationary valves.

N, copper bushings between valves M and the metal water-space B.

These bushings keep rust from coming in contact with the leather on the valves, and thus keep the valves always pliable.

O, an air-chamber in the pipe below the water-space B, for the purpose of easing the water, when the pump is in motion.

P, the outside pipe below the water-space, forming the air-chamber O, and for the conveyance of water to the pump.

Q, copper rings on the valves K. These copper rings rise above the valves, and are inside of the leather packing L, and prevent the leather packing from falling inward, and getting out of place.

R, inside pipe, which forms air-chamber O.

S, bow-handles to valves M, to lift them out of place with.

T, outside pipe, running from the pump to the bottom of the vessel. In the top of this pipe are holes left open, which permit air to pass down to the water.

U, cap on the top of pipe T, screwed on, to cover it up.

V, a measuring-rod, inside of pipe T, and connected to cap U at the top.

The cap U can be unscrewed, and the rod raised out of its position, and the depth of the water in the vessel can be determined.

W, packing on the stop-cock I.

X, brakes, with which to work the pump. These are not on the model, but are necessary to work the pump.

Y, outlet for the water to flow from reservoir E.

Z, legs of the pump.

Operation.

Work the brakes X, and the water will be raised. Whenever it is necessary for the water to be let out of the pump, start stop-cock I, and the water will immediately fall back down the pipes from the pump to the bottom of the vessel; and when it is necessary to sound the vessel, to see the depth of water, just unscrew cap U and raise rod V, and the work is done.

Claims.

I claim as my invention—

1. The arrangement of water-space B, cylinder C, air-chamber D, water-basin E, brake F, lifting-rods H, lifting-valves K K, stop-cock I, lower valves M, air-chamber O, pipe P, and inside pipe R, substantially as described.

2. Pipe T, cap U, and rod V, substantially as and for the purpose described.

B. W. FELTHOUSEN.

Witnesses:

J. B. SMITH,

WILLIAN HORNOR.